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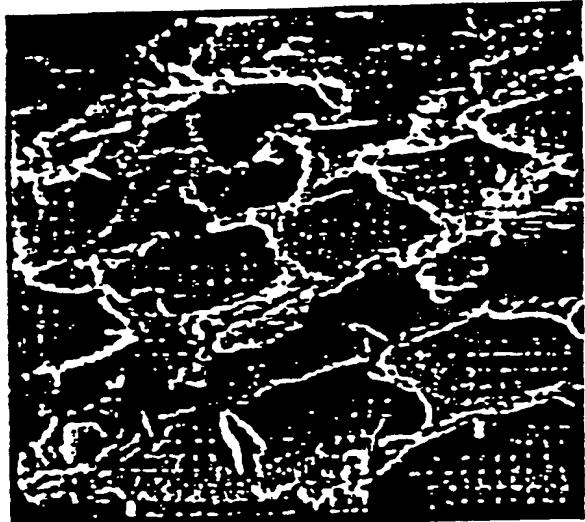
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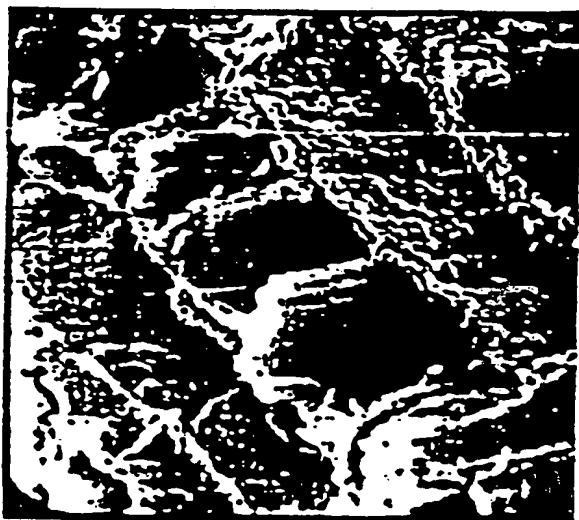
1800 X. 1 mm = 370 nm

FIG. 3e



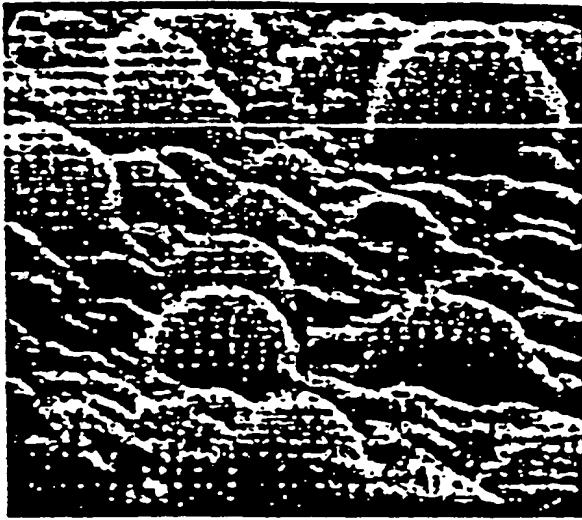
5000 X. 1 mm = 133 nm

FIG. 3f



2000 X. 1 mm = 333 nm

FIG. 3g



20,000 X. 1 mm = 33 nm

FIG. 3h

FIGS. 3e-3h: Microstructure of the cellulignin with globalized lignin



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Diffractiom of X-ray of wood and eucalyptus cellulose

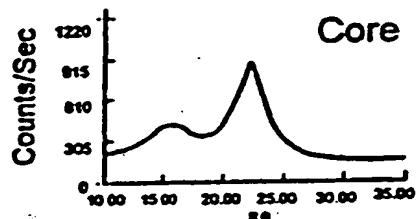


FIG. 4a

Diffractiom of X-ray for cellulignim

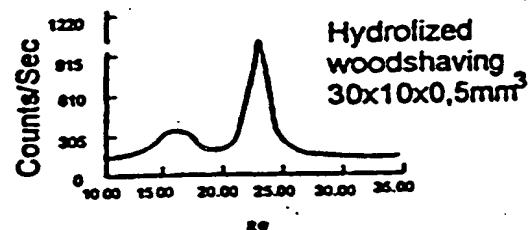


FIG. 4d

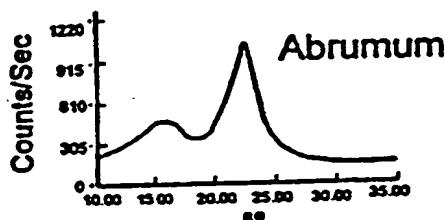


FIG. 4b

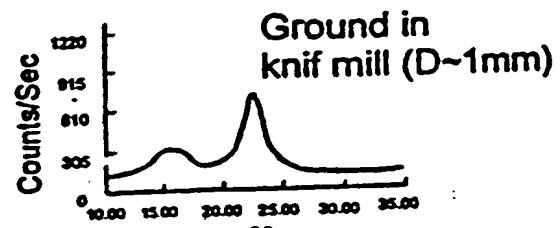


FIG. 4e

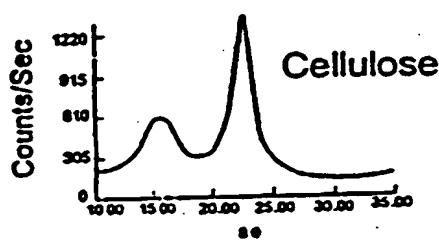


FIG. 4c

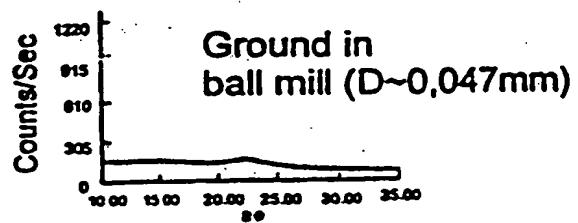


FIG. 4f

FIGS. 4a-4f : X-Ray diffratogram for wood, cellulose and cellulignin